

Hawley's
Condensed Chemical
Dictionary

TWELFTH EDITION

Revised by
Richard J. Lewis, Sr.



VAN NOSTRAND REINHOLD COMPANY
New York

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L-dopa. See L-dihydroxyphenylalanine.

dope. (1) Sizing formulation consisting of solutions of nitrocellulose, cellulose acetate, or other cellulose derivations applied to crepe yard to set the twist and assist creping, and to leather to form a high-gloss finish. (2) A combustible, such as wood pulp, starch, sulfur, etc., used in "straight" dynamites. (3) A trace impurity introduced into ultrapure crystals to obtain desired physical properties, especially electrical properties. Examples: erbium oxide doped with thulium for use as laser crystals; germanium or silicon doped with boron or arsenic for use as semiconductors.

Doppler effect. A shift toward longer (shorter) wavelengths for waves reaching an observer when the source of the waves is moving away from (toward) the observer.

dormant oil. (refined mineral oil).
Properties: Viscosity 90-150 sec (Saybolt 100F).
Unsoluble residue of 50-70%.
Use: As insecticide.

dormant spray. Agricultural insecticidal spray applied during winter or early spring when plant is dormant.

dosimetry, radiation. Measurement of the amount of radiation delivered to the body of an individual. The permissible dose is the quantity of radiation which may be received by an individual over a given period with no detectable harmful effects. For x- or γ-ray exposure the permissible dose is 0.3 roentgen/week, measured in air. All workers with radioactive materials are expected to wear some device for detecting incident radiation. A dosimeter based on fiber optics has been developed for possible application in radiation therapy.
See also rad; rem.

DOT. Abbreviation for Department of Transportation, the agency responsible for the shipping regulations for hazardous products in the U.S.

DOTG. Abbreviation for di-o-tolylguanidine.

dotriacontane. (dicetyl). $\text{CH}_3(\text{CH}_2)_{30}\text{CH}_3$
Properties: Crystals, d 0.823, bp 310C, mp 70C.
Use: Research.

DOTT. Abbreviation for di-o-tolylthiourea.

double bond. See unsaturation.

double decomposition. (double displacement, double replacement, metathesis).

Reaction of two compounds to form two new compounds.

double displacement. See double decomposition.

double layer, electric. See electric double layer

double replacement. See double decomposition.

double salt. A hydrated compound resulting from crystallization of a mixture of ions in aqueous solution. Common examples are the alums, made by crystallizing from solution either potassium or ammonium sulfate and aluminum sulfate; Rochelle salt (potassium sodium tartrate), made from a water solution of potassium acid tartrate treated with sodium carbonate; and Mohr's salt (ferrous ammonium sulfate), crystallized from mixed solutions of ferrous sulfate and ammonium sulfate.
See also nickel ammonium sulfate.

"Dowanol" [Dow]. TM for a series of glycol monodethers.
Use: Solvents, intermediates for plasticizers, bactericidal agents, and fixatives for soap and perfumes.

"Dowelene" [Dow]. TM for a series of solvents for specialized cleaning. A stabilized emulsion of caustic soda, a detergent, and a sequestering agent. EC: A colorless liquid, fp -56.6, bp 77-122C, d 1.381. WR: Inhibited 1,1,1-trichloroethane.

"Dow Corning" [Dow-Corning]. TM for a wide range of silicone and polysiloxane products including emulsions, lubricants, greases, mold-release agents, laminating polymers, electrical varnishes, and heat-resistant coatings.

"Dowetch" [Dow]. TM for magnesium photoengraving sheet, plate, and extruded tube. Also applied to chemicals used in the one-step engraving process.

"Dowex" [Dow]. TM for a series of synthetic ion-exchange resins made from styrene-divinylbenzene copolymers having a large number of ionizable or functional groups attached to this hydrocarbon matrix. These functional groups determine the chemical behavior and types of ion-exchange resin. The strong-acid cation resins are capable of exchanging cations, e.g., sodium for calcium and magnesium, as in softening water. The strong-base anion resins are capable of exchanging anions.

"Dowfax 9N" [Dow]. TM for a series of non-ylphenolethylene oxide adducts.

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